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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,691	03/03/2004	Sung Chun Choi	RPL-0030	2587
34610 7590 03/09/2007 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER ROY, SIKHA	
			ART UNIT	PAPER NUMBER
			2879	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

**Application No.**

10/791,691

**Applicant(s)**

CHOI ET AL.

**Examiner**

Sikha Roy

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 8, 2007 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,376,995 to Kato et al.

Regarding claim 1 Kato discloses (Fig. 1 column 7 lines 36-42, column 8 lines 1-12, column 10 lines 1-28) a plasma display panel comprising a scan (first) electrode 21 and a sustain (second) electrode 22 which are formed on the upper substrate 10 and an address (third) electrode 23 formed on a lower substrate 20 wherein a distance d between the scan and sustain electrodes is set ( 0.5 mm) wider than a distance L (0.12mm) between scan electrode and the address electrode so that  $d > L$  is satisfied .

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Kato further discloses this configuration results in a positive column discharge and is sustained in a sustain period.

Regarding claim 11 Kato discloses in Fig. 1 the distance between the sustain electrode 22 and the address electrode 23 is set the same as that between the scan electrode 21 and the address electrode 23.

Regarding claim 12 Kato discloses the distance between the scan and the sustain electrode is 500 $\mu$ m.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,637,995 to Kato et al. as applied to claim 1 above, and further in view of U.S. Patent 6,720,736 to Lee et al.

Regarding claim 2 Kato is silent about an auxiliary electrode formed on the address electrode in a portion where the scan and sustain electrodes intersect the address electrode.

Lee in analogous art of plasma display panel discloses (Fig. 7 column 4 lines 12-31 column 6 line 63 through column 7 line 3) discloses auxiliary electrodes 62Xa formed on the address electrode 62X in a portion where the scan and sustain electrodes (62Xa

perpendicularly overlaps trigger electrode playing role of scanning electrode) intersect the address electrode. Lee further teaches this configuration of plasma display panel is capable of improving its discharge efficiency and brightness.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include the auxiliary electrode formed on the address electrode of Kato at the portion of intersection of sustain and scan electrodes with address electrode as taught by Lee for improving the discharge efficiency and brightness of the display panel.

Regarding claim 3 Lee discloses the auxiliary electrode is extended in a direction parallel to the scan electrode and sustain electrode at the intersecting portion.

Regarding claim 4 it is clearly evident from Fig. 8 that the auxiliary electrode 62Xa has width wider than the scan and sustain electrode (trigger electrode acting as scanning electrode).

Regarding claim 5 Kato and Lee disclose the claimed invention except for the width of the auxiliary electrode being same as that of the scan and sustain electrodes. It would have been obvious matter of design choice to set the width of the auxiliary electrode same as that of the scan and sustain electrodes since the applicant has not disclosed that this configuration solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the width of the auxiliary electrode being wider than that of the scan and sustain electrodes.

Regarding claim 6 Kato and Lee disclose the claimed invention except for the width of the auxiliary electrode being narrower than that of the scan and sustain electrodes. It would have been obvious matter of design choice to set the width of the

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auxiliary electrode narrower than that of the scan and sustain electrodes since the applicant has not disclosed that this configuration solves any stated problem or is for any particular purpose.

Regarding claims 7 and 8 Lee discloses the auxiliary electrode is extended in both directions (including one direction) parallel to the scan and sustain electrodes at the intersecting portion.

Regarding claims 9 and 10 Lee discloses the auxiliary electrode is extended parallel to the scan electrode and the sustain electrode at a portion where the auxiliary electrode intersects the scan and sustain electrodes respectively.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. KR 20040099054 to Tae et al. discloses a plasma display panel having distance between the scan and sustain electrodes ( $440\text{ }\mu\text{m}$ ) greater than the distance ( $125\mu\text{m}$ ) between the address electrode and the scan and between address and sustain electrode and thus generating positive column and improving luminous efficiency.

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***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Sikha Roy*

Sikha Roy  
Patent Examiner  
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